



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,976	05/10/2002	Steven Thomson	146-01	6339

23713 7590 04/16/2004

GREENLEE WINNER AND SULLIVAN P C  
5370 MANHATTAN CIRCLE  
SUITE 201  
BOULDER, CO 80303

EXAMINER
----------

BERGIN, JAMES S

ART UNIT	PAPER NUMBER
----------	--------------

3641

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/030,976

Applicant(s)

THOMSON ET AL.

Examiner

James S. Bergin

Art Unit

3641

My

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9/30/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 18.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The specification is objected to because reference character 4 has been used to designate both "the legs 4" and "the passage 4" on page 8. Appropriate correction is required.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 24-26, 36, 37 and 39-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 24-26 and 37, it appears that an attempt is being made to positively claim the primer which had not previously been claimed in independent claim 23, lines 2-4 which reads; *"wherein the sleeve portion is adapted to receive a primer and comprises a blast hole engagement means as an integral part of the sleeve portion"*.

In claim 36 and 37, it is unclear what the external dimension of the loading hose is because the loading hose has never been positively claimed.

In claims 39-42, the preamble states; *"...which method comprises the steps of inserting a primer into a primer casing as claimed in any of claims 23, 24, 26, 27, 28, 29, 29, 30, 34, 35, 36 or 38"*. However claims 23, 24, 26, 27, 28, 29, 29, 30, 34, 35, 36 or 38 do not positively claim a primer in a primer casing.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 23-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Gremillion (US 5,343,002 A).

The following rejections are being made in as much as the claims can be understood because of the indefiniteness previously outlined above.

Regarding claim 23, Gremillion discloses a primer casing 24 (figures 1, 2, 4 and 5), comprising a sleeve portion 26 and a leading portion 32 as integral components of a unitary piece, wherein the sleeve portion 26 is adapted to receive a primer 38 and comprises a blasthole engagement means 50 as an integral part of the sleeve portion 26, and wherein the leading portion 32 comprises a nose cone which is provided at one end as an extension of the sleeve portion 26.

Regarding claim 24, the primer 38 of Gremillion is a cylindrical cartridge (figure 2).

Regarding claim 25, the sleeve portion 26 of Gremillion defines a cylindrical passage into which the primer 38 may be slidably inserted.

Regarding claim 26, the sleeve portion 26 of the primer casing of Gremillion comprises a primer retaining means 48 for engaging the threads 46 of the primer 38 (figures 2-5).

Regarding claim 27, the apex or penetrating point 34 of nose cone 32 of Gremillion is rounded to some degree at least where it joins the tapered portion of nose cone 32 (column 2, lines 49-52, figure 2).

Regarding claim 28-31, the blasthole engagement means 50 of Gremillion comprises a projection from the sleeve portion 26 and is integral therewith and attached thereto by an integral flexible hinge, is movable between a retracted position and a blasthole engagement position, and in a retracted position the blasthole engagement means 50 is capable of abutting the sleeve portion 26 to some degree.

Regarding claim 32, the projection 50 of Gremillion is inclined outwardly relative the primer casing and rearwardly relative to the leading portion 32 while in the blasthole engagement position.

Regarding claim 33, Gremillion's projection 50 comprises a blasthole engagement means 54 at its end (column 3, lines 2-23, figure 2).

Regarding claim 34-36, the diameter of Gremillion's sleeve portion 26 is greater than the diameter of the pipe 22 and is capable of functioning as a loading hose engaging means (column 2, lines 52-60; figures 2 and 5).

Regarding claim 37, of Gremillion's shoulders 30 (figures 2 and 5) would at least prevent contact between a loading hose and the primer section within the section of the casing 24 that is below the shoulders 30, specifically the section defined by the tapered section 32 (figure 34). In any event, it would appear from figure 2 that no section of the pipe 22 is in contact with the primer 38.

Regarding claim 38, Gremillion's sleeve portion 26 has a pipe receiving aperture at one end (figure 2 and 5) and apertures for receiving the detents 48 (figures 2 and 5).

Regarding claim 39, Gremillion discloses a method which comprises the steps of inserting a primer into a primer casing and positioning the casing at a desired location in a blasthole.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gremillion (US 5,343,002 A).

Gremillion discloses a method of loading a blasthole as described above with regard to claim 39. Additionally, Gremillion discloses in column 2, lines 65-67, that *"other elongated members may be used in lieu of the pipe 22 and variations in the size of the components may vary from that shown in the drawings"*.

Gremillion states in column 3, line 67 – column 4, line 3, that *"devices other than seismic charges can be mounted on the point 24 such as a seismic phones, jet hose, or any other device which is utilized at the bottom of a hole or bore formed in the surface of the earth"*. This disclosure inherently includes the use of Gremillion's disposable primer and primer casing in a rock breaking application such as in the borehole of a mining operation.

Gremillion does not specifically mention that the "*other elongated members*" includes a loading hose per se. The examiner takes official notice that a loading hose is an art recognized equivalent structure to a loading pipe such as Gremillion's loading pipe 22.

Gremillion does not specifically disclose charging a blasthole with bulk explosives.

The examiner takes official notice that loading a blast hole with bulk explosives was well known in the mining industry, the bulk explosives being ignited by a primer so as to break apart or weaken the rock structure.

Regarding claims 40 and 42, it would have been obvious to one having ordinary skill in the art at the time that the invention was made to use a loading hose as an alternative to a loading pipe in Gremillion's method because the selection of either of these known art equivalents, as officially noticed above, would be well within the level of ordinary skill in the art.

Regarding claim 41 and 42, it would have been obvious to one having ordinary skill in the art at the time that the invention was made to use Gremillion's blasthole loading device in a rock blasting application, and to additionally charge the blasthole with bulk explosives for ignition by Gremillion's primer, as officially noticed above, so as to break apart or weaken a rock structure.

**Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gremillion et al. (US 5,860,482 A); Coast et al. (US 5,811,741 A); and Babb (US 3,280,742 A).

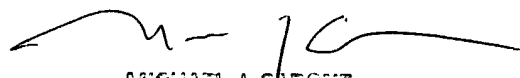
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Bergin whose telephone number is 703 308-8549. The examiner can normally be reached on Monday - Wednesday and Friday, 8.30 - 5.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 703 306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James S. Bergin



MICHAEL J. CARONE  
SUPERVISORY PATENT EXAMINER